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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NGUYEN, STEVEN H D

ART UNIT PAPER NUMBER

2665

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/698,881

Applicant(s)

TORMA ET AL.

Examiner

Steven HD Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4 and 10/27/00</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed 12/28/00 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Varghese (USP 5313467).

Regarding claims 1 and 7, Varghese discloses a multiplexing arrangement in a network element of a telecom munications network, comprising a first interface unit (IFU) for receiving standard PCM signals in the network element (Fig 1, Ref 12 has a interface for receiving a standard PCM signals), and multiplexing means (FMU) (Fig 1, Ref 12 for multiplexing the PCM signals from a first source and packet stream signals from a second source into a payload of a frame wherein the payload is corresponding the PCM signals from the first source) for multiplexing said PCM signals on a time division basis into a transmission frame having the total capacity of the payload portion of the frame substantially corresponding to the capacity of N PCM signals, the multiplexing means are implemented as configurable in such a way that the total capacity of the payload portion can be divided between at least two parts of variable capacity in such a way that each part can be allocated a desired portion of the total capacity of the payload portion in accordance with the current transmission requirement, and that a part of the payload depending on the desired capacity is allocated to at least one traffic source from a group in which a number of PCM signals constitute a first traffic source and a number of packet data streams constitute a second traffic source (See col. 2, lines 59 to col. 3, lines 34 and col. 6, lines 9-54, the multiplexer is configured for dividing the payload into two parts having a variable capacity based on the current transmission required of the PCM signals wherein a part is used to carry PCM signals and the other part is used to carry packet data stream; See Fig 4).

Regarding claim 2, Varghese discloses a portion of the total capacity of the transmission frame corresponding to the capacity required by one PCM signal multiplied by an integer is allocated to all traffic sources using the same transmission frame (Fig 4 discloses a slot for

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carrying a PCM signal such voice is multiplied with the number of allocated all the traffic source).

Regarding claim 6, Varghese discloses the capacity of the payload portion is entirely allocated for the use of one packet data stream (Fig 4, it is inherently disclosed the capacity of payload portion being allocated to one packet data stream if not PCM signal is transmitting).

5. Claims 1, 2 and 6-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Calvignac (USP 4761781).

Regarding claims 1 and 7, Calvignac discloses a network element (Fig 10) for a telecommunications network, comprising a first interface unit (IFU) (Fig 10, Ref N circuits) for receiving standard PCM signals in the network element, multiplexing means (FMU) (Fig 10, Medium access) for multiplexing said PCM signals on a time-division basis into a transmission frame, the total capacity of the payload portion of the frame essentially corresponding to the capacity of N PCM signals (Fig 10, complex frame has a capacity which corresponds to N PCM signals from the circuit), the multiplexing means are provided with configuring and allocating means (FMU, CU) (a) for dividing the total capacity of the payload portion between at least two parts of variable capacity in such a way that each part can be allocated a desired portion of the total capacity of the payload portion in accordance with the current transmission requirement (Col. 2, lines 7-39 discloses a means for dividing the payload of the complex frame into two variable parts wherein each part is corresponding the required current transmission of the first source and the other part corresponds to packet stream from the second source), and (b) for allocating a part with the desired capacity to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams

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constitutes a second traffic source (See col. 3, lines 37 to col. 4, lines 26, each portion carries a type of traffic such PCM or packet).

Regarding claim 2, Calvignac discloses a portion of the total capacity of the transmission frame corresponding to the capacity required by one PCM signal multiplied by an integer is allocated to all traffic sources using the same transmission frame (See col. 4, lines 13-25, the capacity required by one PCM signals is multiplied by an number is allocated to all traffic sources using the same frame in order to allocate the bandwidth for PCM signal, one PCM signal is 8 bit and equal one slot).

Regarding claim 6, Calvignac discloses the capacity of the payload portion is entirely allocated for the use of one packet data stream (it is inherently disclosed the capacity of payload portion being allocated to one packet data stream if not PCM signal is transmitting).

6. Claims 1, 2, 4 and 6-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Chopping (USP 5793760).

Regarding claims 1 and 7, Chopping discloses a network element (Fig 3) for a telecommunications network, comprising a first interface unit (IFU) (Fig 3, Ref 30 CHAN for receiving PCM signals) for receiving standard PCM signals in the network element, multiplexing means (FMU) (Fig 3, MUX) for multiplexing said PCM signals on a time-division basis into a transmission frame, the total capacity of the payload portion of the frame essentially corresponding to the capacity of N PCM signals (Col. 4, lines 39-43 discloses the portion of payload corresponding the PCM signals), lines complex frame has a capacity which corresponds to N PCM signals from the circuit), the multiplexing means are provided with configuring and allocating means (FMU, CU) (a) for dividing the total capacity of the payload portion between at

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least two parts of variable capacity in such a way that each part can be allocated a desired portion of the total capacity of the payload portion in accordance with the current transmission requirement (Col. 4, lines 39-43 discloses the capacity of payload of the frame is divided between the current transmission of PCM signals and other part is allocated for packet stream) discloses a means for dividing the payload of the complex frame into two variable parts wherein each part is corresponding the required current transmission of the first source and the other part corresponds to packet stream from the second source), and (b) for allocating a part with the desired capacity to at least one traffic source from a group in which a number of PCM signals constitutes a first traffic source and a number of packet data streams constitutes a second traffic source (Col. 4, lines 39-43 discloses the portions carry at least one of traffic source such PCM or packet stream and col. 2, lines 39-43).

Regarding claim 2, Chopping discloses a portion of the total capacity of the transmission frame corresponding to the capacity required by one PCM signal multiplied by an integer is allocated to all traffic sources using the same transmission frame (col. 3, lines 39-43 the capacity required by one PCM signals is multiplied by an number is allocated to all traffic sources using the same frame in order to allocate the bandwidth for PCM signal, one PCM signal is 8 bit and equal one slot).

Regarding claim 4, Chopping discloses at least one traffic source is ATM traffic (Fig 3, ATM).

Regarding claim 6, Chopping discloses the capacity of the payload portion is entirely allocated for the use of one packet data stream (it is inherently disclosed the capacity of payload portion being allocated to one packet data stream if not PCM signal is transmitting).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 3, 5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Varghese/Calvignac/Chopping as applied to claims 1 and 7 above, and further in view of the admitted prior art.

Regarding claim 3 and 8, Varghese discloses standard PCM signals and at least one packet data stream are received in the network element, the total capacity of the payload portion is divided between M ($M < N$) PCM signals and one packet data stream, the data stream being allocated a capacity corresponding to (N-M) PCM signals, and packet adapter for receiving a packet stream into its allocated bandwidth via a multiplexer (Col. 6, lines 9-34, the bandwidth allocation means will allocated number of time slot for transmitting PCM signals based on the number of PCM signals that are received and the other portion will be allocated for packet data stream). However, Varghese/Calvignac/Chopping fails to disclose a rate adaptation by means of which the bit rate of the packet stream is adapted to correspond to the capacity allocated to it is performed on the packet stream the output of said rate adaptation means. In the same field of endeavor, the admitted prior art (Fig 3) discloses a rate adaptation for receiving the packet stream.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply an rate adaptation with ATM interface as disclosed by the admitted

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prior art into the system of Varghese/Calvignac/Chopping. The motivation would have been to map the transmitting rate of the ATM interface with the allocated bandwidth for packet stream on the payload portion of transmission frame.

Regarding claim 5, Varghese discloses bits of each part are interleaved in the payload portion, and that of the bits of the payload portion, it is indicated bit-specifically whether they are allocated for the use of PCM signals or a packet data stream (Fig 4, the PCM and packet stream is multiplexed into the frame based on allocated masked that indicates where the PCM and PACKET stream must be multiplexed into the frame; See col. 14, lines 36-58 and Ref 62 of Fig 7a).

Regarding claim 5, Calvignac discloses bits of each part are interleaved in the payload portion, and that of the bits of the payload portion, it is indicated bit-specifically whether they are allocated for the use of PCM signals or a packet data stream (a slot table for indicating which slot in the frame is assigned for multiplexing circuit or packet bits; see col. 9, lines 30-42).

Regarding claim 5, Chopping discloses bits of each part are interleaved in the payload portion, and that of the bits of the payload portion, it is indicated bit-specifically whether they are allocated for the use of PCM signals or a packet data stream (col. 3, lines 20-25).

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Varghese/Calvignac as applied to claim 1 above, and further in view of Chopping (USP 5793760).

Varghese/Calvignac discloses fails to disclose at least one of the traffic sources is constituted by an ATM cell stream. In the same field of endeavor, Chopping discloses a method and system for multiplexing a plurality of signals into a frame wherein at least one is a ATM cell stream (Fig 1a).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to apply an ATM traffic source into a multiplexer for multiplexing PCM and ATM signals into a frame as disclosed by Chopping's system into the system of Varghese/Calvignac. The motivation would have been to provide a method for transmitting ATM and PCM signal without transform 64 Kbits into ATM or ATM to 64 kbits.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moore (USP 5719858) discloses a method and system for pre-assigning a portion of time slots for packet transmitting and the other portion of time slots for transmitting PCM signals and control signals.


Froggatt (USP 4707826) discloses a multiplexer for multiplexing a PCM signals and packet stream signal wherein the packet stream is multiplexed into the slots which is not use by PCM signal.

Calvignac (USP 4763321) discloses a method and system for dynamic bandwidth allocation between the circuit slots and packet bit stream in a communication network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (703) 308-8848. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven HD Nguyen
Primary Examiner
Art Unit 2665
4/30/04